

# FIRE-TROL® 936

## LONG-TERM RETARDANT - GROUND APPLICATION



### DESCRIPTION

FIRE-TROL® 936 long-term fire retardant is a concentrated liquid that mixes readily with water by recirculation, agitation or with mechanical or electronic liquid proportioning systems.

Long-term retardant products are commonly known as "retardants". They chemically alter normal pyrolysis (heat induced chemical decomposition) and limit combustion processes. A series of complex chemical reactions converts cellulose into non-combustible materials. The active agent is a nonflammable salt with standing high temperatures (whereas water would long since have evaporated) thus operating to retard the spread of flame.

FIRE-TROL 936 is formulated for ground application, and is ideal for use along railways, motorways and developed areas to prevent ignition and spread of wildland fires.

### APPLICATIONS

FIRE-TROL 936 is primarily used in ground applied but can also be applied by helicopter. In direct attack, the product is used at a concentration rate ranging from 12% to 14% (v.v). In indirect attack, in order to provide a retardant effect, the concentration rate must be from 18% to 20% (v.v). The coverage level must be adapted to the nature, structure and density of the vegetation. Experiments show that a coverage level from 1.5 to 2 liters/m<sup>2</sup> is sufficient for the low vegetation whereas 7 to 8 liters/m<sup>2</sup> are needed for tall trees.

### TOXICOLOGICAL PROPERTIES

FIRE-TROL 936 is considered non-toxic. It has successfully been submitted to toxicological and ecotoxicological tests in compliance with the OECD guidelines and current UE Directives (2005).



### CORROSION

FIRE-TROL 936 has been tested either electro chemically or using (coupons) methods. These tests have shown good inhibition action of the product on aluminum, steel and brass (CEREN, National French Research Laboratory for Firefighting).

Approved and certified by French Civil Security - DGSCGC).

PRODUCT CHARACTERISTICS	
Density of LC	1.38 - 1.43 kg/dm <sup>3</sup>
Density of Solution	1.08 - 1.10 kg/dm <sup>3</sup>
pH of LC at 68°F (20°C)	6.0 - 6.5
pH of Solution at 68°F (20°C)	6.4 - 6.6
Viscosity of LC	About 50 cP
Viscosity of Solution	Excellent (no loss of efficiency after 4 years of storage)

- ✓✓✓✓ = Superior Effectiveness
- ✓✓✓ = Excellent Effectiveness
- ✓✓ = Good Effectiveness
- ✓ = Baseline Effectiveness

	LONG-TERM RETARDANT	GEL	CLASS A FOAM	WATER
Indirect Attack	✓✓✓✓	✓✓	✓	
Direct/Parallel Attack	✓✓✓✓	✓✓✓	✓✓	✓
Interior Structure Attack		✓✓	✓✓✓✓	✓
Structure Protection: -Indirect Application	✓✓✓✓	✓✓✓	✓✓	✓
Structure Protection: -Direct Application		✓✓✓✓	✓✓✓	✓
Mop Up	✓✓	✓✓	✓✓✓✓	✓
Prescribed Burn Control	✓✓✓✓	✓✓✓	✓✓	✓

**RECOMMENDATIONS**

- Mixing and loading: use procedures specific to each situation.
- Necessary training of ground crews to the use of retardant.
- Appropriate clothing.
- Wash off equipment circuits after each use.

**COMPOSITION**

Amonium polyphosphate, corrosion inhibitor, wetting agent.

**LIMITS IN THE PERFORMANCE OF GROUND  
RETARDANT**

- Rain washes off the retardant.
- Protective barriers must be laid down when the risk of fire is real (except in countries with no risk of precipitation for a period of time).
- When the cannon is not controlled from the fire-truck cabin, the holder is exposed to splashes.

**ADDED VALUE**

More efficient than water (even enhanced water) either in direct or indirect attack.

- More comfortable for the nozzle operator (no vapor emission).
- Better adapted performance (flexibility in setting the parameters of coverage level).
- Can be used at night which is a major advantage when aircrafts cannot fly.
- Ground applications are particularly effective in the protection of specific areas such as residential areas or rural communities, factories, gas stations, etc. When enough means are available, chemical barriers can be a determining factor in controlling forest fires.

**HANDLING PRECAUTIONS**

- FOR DETAILED SAFETY INFORMATION, please refer to the SDS.
- FIRE-TROL 936 fire retardant is moderately irritating to eyes and slightly irritating to skin. Prolonged or repeated contact with concentrate may produce skin irritation and inhalation of mists can irritate the nose and upper respiratory system.
- **Eye Protection:** Goggles are recommended when handling concentrate. If in the eyes, flush immediately with plenty of water for at least 15 seconds.
- **Skin Protection:** Wear protective clothing and chemical resistant gloves when handling concentrate. Exposed skin should be washed as soon as possible.
- **Respiratory Protection:** None required. Avoid breathing mist of vapor.
- **Other precautions:** Keep container closed. Use with adequate ventilation.
- These precautions and practices are like those used with any heavy-duty detergent.

· For complete SDS, visit [www.perimeter-solutions.com](http://www.perimeter-solutions.com)

**PACKAGING**

FIRE-TROL 936 packaging options include 20 liter pails, 1,000 liter IBC and bulk trucks. Contact your local authorized BIOGEMA distributor or factory representative for details. Visit [www.perimeter-solutions.com](http://www.perimeter-solutions.com)

**Trusted. Solutions That Save.****FOR MORE INFORMATION**

Contact any of our worldwide Perimeter Solutions Fire Safety offices or visit:

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